## **ORIGINAL**



1 BEFORE THE ARIZONA CORPORATION COMMISSION 2 **COMMISSIONERS** MARC SPITZER - Chairman 3 WILLIAM A. MUNDELL 4 JEFF HATCH-MILLER MIKE GLEASON 5 KRISTIN K. MAYES 6 IN THE MATTER OF SERVICE QUALITY DOCKET NO. E-01032A-99-0401 7 ISSUES, ANALYSIS OF TRANSMISSION NOTICE OF FILING ERRATA TO ALTERNATIVES AND PROPOSED PLAN OF SUPPLEMENTAL RESPONSE TO 8 ACTION IN THE SANTA CRUZ ELECTRIC **COMMISSION QUESTIONS AND UPDATED OUTAGE RESPONSE** DIVISION OF CITIZENS UTILITIES COMPANY 9 **PLAN** 10 11 12 Tucson Electric Power Company and UNS Electric, Inc., through undersigned counsel, 13 file the following errata to the Supplemental Response to Commission Questions and Updated 14 Outage Response Plan filed April 30, 2004 in the above-captioned matter, as follows: 15 Exhibit D: For the year 1996, number of interruptions should be 2 instead of 6; and 16 For the year 1998, number of interruptions should be 4 instead of 5. 17 RESPECTFULLY SUBMITTED this 3<sup>rd</sup> day of May 2004 18 19 ROSHKA HEYMAN & DEWULF, PLC 20 21 Ву \_4 22 Raymond S. Heyman One Arizona Center 23 DOCUMENT CONTROL 400 East Van Buren Street, Suite 800 AZ CORP COMMISSION 24 Phoenix, Arizona 85004 Attorneys for Tucson Electric Power Company 2004 MAY - 3 P 4: 10 25 Arizona Corporation Commission and UNS Electric, Inc. DOCKETED 26 RECEIVED MAY - 3 2004

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Exhibit D

## UNS Electric, Inc. Santa Cruz County Transmission Reliability Analysis and Recommendations

## **Existing System**

The UNS Electric Santa Cruz load is primarily served by a single 115kV circuit interconnected with the Western Area Power Administration's ("WAPA's") Nogales Tap Switchyard. The reliability of this circuit has historically been somewhat marginal. During the late 1990's, several extended outages resulted from storm damage and structural failures.

Three vintage simple cycle turbines are also located at Valencia Substation in Nogales. The heat rate and age<sup>8</sup> of these turbines is such that they are not economically competitive with remote generation resources. The Valencia Turbines are primarily utilized to provide a backup energy supply to Valencia and Sonoita Substations in the event of a loss of the 115kV transmission line. The turbines have been operated by a local operator.

## **Pre-UES Improvements**

Citizens Utilities Company (CUC) made several improvements to the 115kV circuit prior to the UniSource acquisition. In 1999 CUC contracted a consultant to perform a structural inspection of the 115kV line. All high priority recommendations resulting from the inspections have been completed. In addition, in the fall of 2001 a project to improve circuit grounding and shielding from lightning strikes was completed. Table 1 illustrates the outage performance of the 115kV circuit through 2003.

Table 1 – 115kV Outages by Year

YEAR	NUMBER OF INTERRUPTIONS	
1995	1	
1996	2	
1997	1	
1998	4	
1999	6	
2000	4	
2001	4	
2002	0	
2003	1	

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<sup>&</sup>lt;sup>8</sup> The turbines were manufactured in 1970 and installed in Japan. They were refurbished in the United States in 1989 and subsequently installed at the Valencia plant.